

***Evergreen Technologies, Inc.***

***AcceleraPCI<sup>TM</sup>***  
***Upgrade Platform***

***White Paper***  
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## ***AcceleraPCI*** ***Upgrade Platform***

- Product Description
- Product Highlights
- Product Overview
- Features and Benefits
- Nature of Demand
- Performance
- Compatibility
- How to order

### ***Product Description***

*AcceleraPCI* is a platform to upgrade older PCs to current new system performance. *AcceleraPCI* uses revolutionary **arbitration technology**<sup>™</sup> to run today's fastest CPU and memory components on a PCI card installed into an Pentium<sup>®</sup> processor-based PC. A typical configuration would be *AcceleraPCI* running an Intel<sup>®</sup> Celeron<sup>™</sup> 433MHz CPU with 64MB of high-bandwidth PC-66 SDRAM. This configuration installed in a Pentium<sup>®</sup> processor-based PC performs to the same level as a new system with a similar configuration.

### ***Product Highlights***

- Delivers up to 400% increase performance in Windows<sup>®</sup> applications\*
- Supports 66MHz front side bus and Intel's future 100MHz front-side bus
- Supports Intel Celeron processors (333-466MHz)
- Includes 128K full speed, on chip, Level 2 cache
- Upgrades Pentium and Pentium w/MMX<sup>™</sup> processor-based systems<sup>•</sup>
- Compatible with all commercial software packages
- Installs in a standard PCI slot in minutes
- Supports up to 256 MB of PC-66/PC100-SDRAM (SODIMM)
- Upgrades without removing host system CPU and memory
- Makes systems Microsoft<sup>®</sup> Windows 2000 compliant
- Makes host system hardware Y2K compliant
- Three year warranty
- Free technical support

### ***Product Overview***

Evergreen's *AcceleraPCI* is a breakthrough technology that transforms older PCs for new system performance. *AcceleraPCI*'s patent-pending technology makes it possible for PC users of Pentium<sup>®</sup> processor-based PCs with standard PCI slots or equivalent AMD K5 and K6<sup>®</sup>, Cyrix 6x86 or IBM 6x86 systems to take advantage of Pentium II processor architecture and high-bandwidth advances in memory and bus technology.

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<sup>1</sup>based on Ziff-Davis Winstone99 benchmarks  
<sup>•</sup> 60 MHz and higher

## ***Features and Benefits***

*AcceleraPCI* combines the ease of standard PCI card installation with the benefits of new system performance. PCs upgraded with *AcceleraPCI* have the capability of using any socket-370 Intel Celeron processor, including future 100 MHz versions. The *AcceleraPCI* also provides support for 256 MB PC-100 SDRAM using two SODIMM sockets.

*AcceleraPCI* also gives you the benefit of choice. If you prefer to select your own configuration, you have the option of configuring an unpopulated *AcceleraPCI* to match your processor and memory requirements. Regardless of *AcceleraPCI*'s initial configuration, populated or unpopulated, you'll always have the ability to re-configure the processor and memory as your needs dictate.

## ***Nature of Demand***

Corporate America has been searching for a solution to the overwhelming cost of purchasing, deploying and maintaining PC assets that have depreciation schedules ranging from three to five years. Unfortunately, during the five-year lifecycle during which corporate PCs depreciate, the industry's software and hardware advancements leapfrog the installed base by at least two generations. Evergreen has been working to solve this fundamental problem:

How can corporate IT professionals make their PCs last as long as their PCs depreciation cycle and still keep them productive?
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For the past two years, Evergreen has been developing a solution to this problem – the revolutionary *AcceleraPCI*. *AcceleraPCI* is a reprieve from obsolescence. It makes older systems run like new systems. It replaces the components in the PC that are obsolete while maintaining the system components that have not improved over time (floppy disk, power supply, chassis, etc). The components that become obsolete are comprised of the high-performance silicon. These components are the CPU, memory and chipset. *AcceleraPCI* replaces these components with the fastest available CPU and memory combination on the PC market.

Evergreen's *AcceleraPCI* offers the best alternative for maintaining the value of a PC installation. With *AcceleraPCI*, IT managers can get new system performance without having to absorb the capital cost of buying new systems or the overwhelming maintenance expense of replacing all their PC's motherboards. *AcceleraPCI* does not require any drivers and does not modify the Operating System, so it will not interfere with corporate PC data standards. *AcceleraPCI* also offers the opportunity to migrate the installed base to the latest productivity software, such as the upcoming Microsoft Office® 2000 and Windows 2000.

*AcceleraPCI* is a simple, fast, cost efficient vehicle to improve the IT productivity of a business.

## ***Performance***

As demonstrated in the graphs below, the performance increase gained from the *AcceleraPCI* is almost three times the performance of the original 233MHz Pentium w/ MMX computer. *AcceleraPCI* upgrades Pentium-based PCs to the performance of comparably configured new PCs.

The following Winstone®99 benchmark illustrates a three times performance gain over a 233 MHz Pentium PC with MMX™.

Original Pentium PC 233 MHz, 32 MB	Before Upgrading	Upgrading with <i>AcceleraPCI</i> 433 MHz, 128 MB
	9.91	27.50

Based on overall score of Winstone 99 for Windows NT 4.0, service pack 4. Test system configuration: Dell Dimension XPS M233S; 233MHz Pentium w/MMX; Motherboard: Intel TigerEye 512K L2 cache on motherboard, Intel 430VX chipset, Toshiba 16x CDROM, ATX motherboard/chassis form factor, Creative labs Vibra 166 (on board sound) Matrox Millenium 2P, 4MB WRAM.

The following Intel Media benchmark illustrates a four to five times performance gain over the original system performance.

Original Pentium PC CPU Speed (MHz) RAM (MB)	Before Upgrading Pentium	Upgrading with <i>AcceleraPCI</i> 433 MHz, 64 MB
133 MHz, 32 MB	112	494
166 MHz, 32 MB	132	494
200 MHz, 32 MB	154	494

Intel Media Benchmark	Original 133 MHz	Original 166 MHz	Original 200 MHz	Evergreen <i>AcceleraPCI</i> 433/64
<b>Windows 95</b>				
Video	111.26	131.96	154.76	390.32
Image Processing	109.40	133.79	156.36	1698.73
3D Graphics	108.86	131.44	150.87	389.63
Audio	118.95	137.36	156.46	748.07
Overall	112.30	132.22	154.08	494.05
<b>Windows 98</b>				
Video	111.16	131.60	152.80	383.64
Image Processing	111.55	135.10	158.59	1711.02
3D Graphics	94.49	115.13	134.68	389.92
Audio	120.62	137.14	158.32	744.79
Overall	108.70	127.91	148.71	490.00

**System configurations:** Intel Hitman ATX system board – Gateway 2000 P-5XXX OEM; ATI Rage PCI IIC VGA card; 32 MB EDO DIMM; Intel Pentium Processor at respective speeds; 512k cache on board L2; WD Caviar 13200 3.2 GB HDD; Toshiba 6X CDROM; 1.44 MB floppy disk; Creative Labs CT2890 ISA Vibra 16 Audio card; 3Com 10 BaseT PCI 10/100.

**AcceleraPCI card configuration:** 370 pin Intel Celeron 433 MHz processor; Intel BX chipset; ROM ver .97 pre beta; 66 MHz bus; Aavid heat sink fan; 64 MB SODIMM SDRAM.

**Test details:** Winstone 99 ver. 1.0; Intel Media Benchmark ver. 1.0.

### ***Compatibility***

*AcceleraPCI* upgrades standard Pentium processor-based PCs that are 60MHz and higher. © To verify that your system is compatible with *AcceleraPCI*, please call Evergreen's Customer Care Center at 541.757.0934 for compatibility information and how to get a free **PreQual™** disk. Or download the **PreQual™** software from our web site at <http://www.evertch.com/AcceleraPCI/AcceleraPCI.asp>.

### ***How to Order***

Please call Evergreen at 541.757.0934 to discuss *AcceleraPCI* with our **Customer Care Center™** sales group.

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© AcceleraPCI is not designed for laptops or 486, Pentium Pro, Pentium II processor based systems